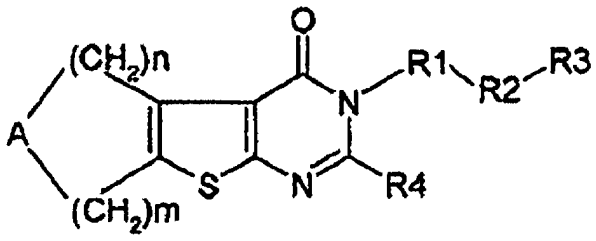
Amendments to the Claims

1. (Original) A compound of the formula (I)



in which

A is O, S, SO, NR5 or CH_2;

R5 is H, C_{1-5}-alkyl, aryl, aralkyl, acyl or alkoxycarbonyl;

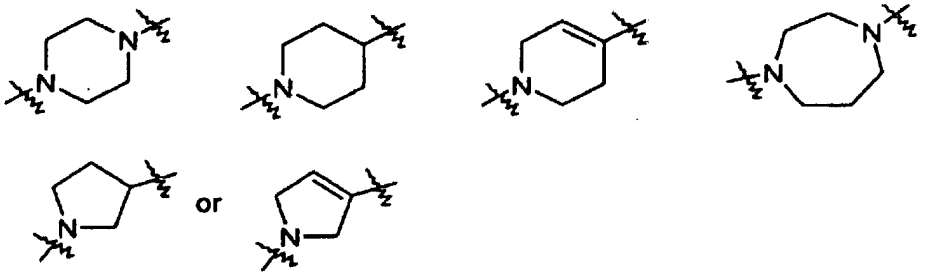
R4 is H or methyl;

n is 1 or 2;

m is 1 or 2;

R1 is C_{1-8}-alkylene;

R2 is a group of the formula



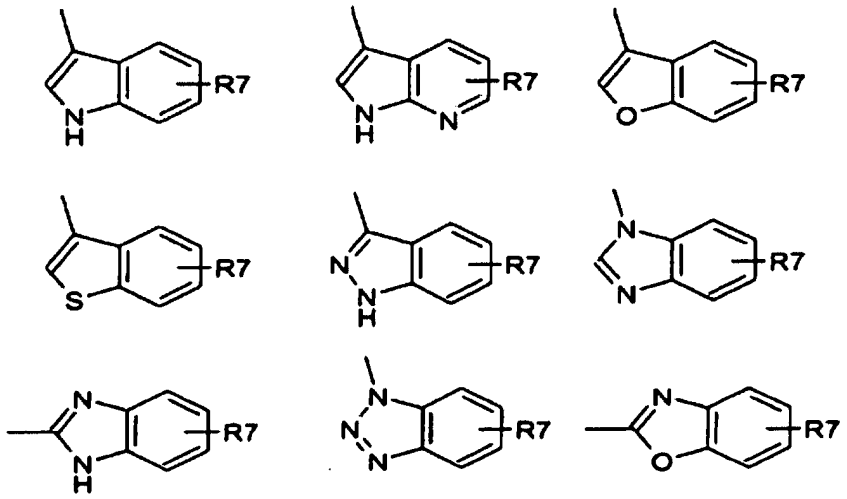
R3 is 5-membered heteroaryl which may be fused to an aryl or heteroaryl radical, where the heteroaryl and, optionally, the fused aryl or heteroaryl radical may have 1, 2 or 3 substituents selected independently of one another from C_{1-5}-alkyl, C_{1-5}-alkoxy, C_{1-5}-alkylthio, halogen, CN, halo-C_{1-5}-alkyl, halo-C_{1-5}-alkoxy, hydroxy -NH_2, -$N(R6)_2$, -NH(R6), aryl, aryloxy, aralkyl, aralkyloxy and heteroaryl, where the substituents aryl, aryloxy, aralkyl, aralkyloxy and heteroaryl may have 1, 2 or 3 substituents selected

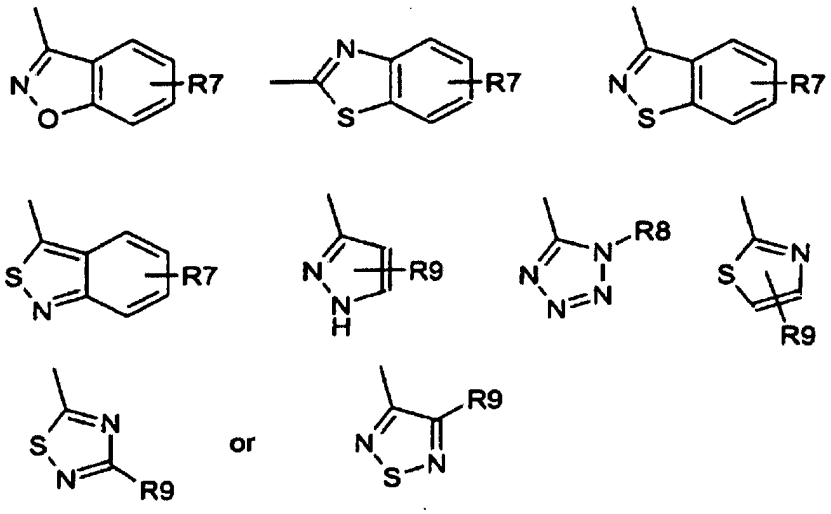
independently of one another from C_{1-5}-alkyl, C_{1-5}-alkoxy, C_{1-5}-alkylthio, halogen, CN, halo-C_{1-5}-alkyl, halo-C_{1-5}-alkoxy, hydroxy, $-NH_2$, $-N(R6)_2$ and -NH(R6); and the radicals R6 are independently of one another C_{1-5}-alkyl, and

physiologically tolerated salts thereof.

2. (Original) The compound according to claim 1, wherein R3 is 1H-indol-3-yl, 1H-pyrrolo[2,3-b]pyridin-3-yl, 1-benzofuran-3-yl, 1-benzothien-3-yl, 1H-indazol-3-yl, 1H-benzimidazol-1-yl, 1H-benzimidazol-2-yl, 1H-benzotriazol-1-yl, 1,3-benzoxazol-2-yl, 1,2-benzisoxazol-3-yl, 1,3-benzothiazol-2-yl, 1,2-benzisothiazol-3-yl, pyrazol-3-yl, 1H-tetrazol-5-yl, 1,3-thiazol-2-yl or 1,2,4-thiadiazol-5-yl, which may have 1, 2 or 3 substituents selected independently of one another from C_{1-5}-alkyl, C_{1-5}-alkoxy, halogen, CN, SCH_3, trifluoromethyl, hydroxy, $-N(C_{1-5}\text{-alkyl})_2$, $-NH(C_{1-5}\text{-alkyl})$, $-NH_2$, aryl, aryloxy, aralkyl, aralkyloxy and heteroaryl, where the substituents aryl, aryloxy, aralkyl, aralkyloxy and heteroaryl may have 1, 2 or 3 substituents selected independently of one another from C_{1-5}-alkyl, C_{1-5}-alkoxy, halogen, CN, SCH_3, trifluoromethyl, hydroxy, $-N(C_{1-5}\text{-alkyl})_2$, $-NH(C_{1-5}\text{-alkyl})$ or $-NH_2$.

3. (Previously Presented) The compound according to claim 2, wherein R3 is a radical of the formula





in which

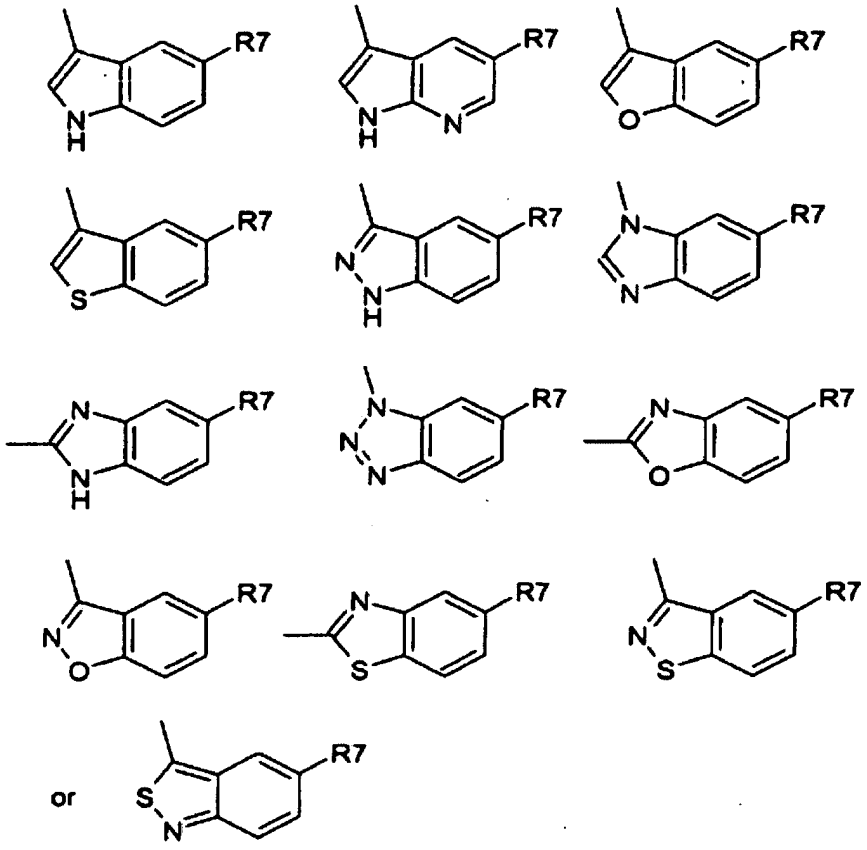
R7 is H, C_{1-5}-alkyl, C_{1-5}-alkoxy, C_{1-5}-alkylthio, halogen, CN, halo-C_{1-5}-alkyl, halo-C_{1-5}-alkoxy, hydroxy, $-NH_2$, $-N(R6)_2$ or -NH(R6); and

R8 is H, C_{1-5}-alkyl, aryl, aralkyl or heteroaryl;

R9 is H, C_{1-5}-alkyl, C_{1-5}-alkoxy, C_{1-5}-alkylthio, halogen, CN, halo-C_{1-5}-alkyl, halo-C_{1-5}-alkoxy, hydroxy, $-NH_2$, $-N(R6)_2$, -NH(R6), aryl, aryloxy, aralkyl, aralkyloxy or heteroaryl, where aryl, aryloxy, aralkyl, aralkyloxy or heteroaryl may have 1, 2 or 3 substituents selected independently of one another from C_{1-5}-alkyl, C_{1-5}-alkoxy, C_{1-5}-alkylthio, halogen, CN, halo-C_{1-5}-alkyl, halo-C_{1-5}-alkoxy, hydroxy, $-NH_2$, $-N(R6)_2$ and -NH(R6); and the radicals

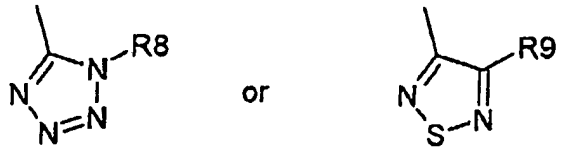
R6 have the meaning indicated in claim 1.

4. (Original) The compound according to claim 3, wherein R3 is a radical of the formula



in which R7 is as defined in claim 3.

5. (Original) The compound according to claim 3, wherein R3 is a radical of the formula



where R8 and R9 are as defined in claim 3.

6. (Previously Presented) The compound according to claim 4, wherein R7 is H, C_{1-5}-alkyl, preferably methyl, halogen or halo-C_{1-5}-alkyl.

7. (Previously Presented) The compound according to claim 5, wherein R8 is C_{1-5}-alkyl or aryl.

8. (Previously Presented) The compound according to claim 5, wherein R9 is C_{1-5}-alkoxy, aryl which may be substituted, or heteroaryl.

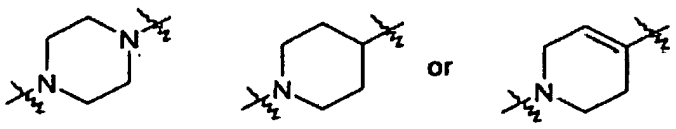
9. (Previously Presented) The compound according to claim 1, wherein A is O, S or NR5, where R5 is as defined in claim 1.

10. (Original) The compound according to claim 1, wherein R4 is hydrogen.

11. (Original) The compound according to claim 1, wherein n is 2 and m is 1 or n is 1 and m is 2.

12. (Original) The compound according to claim 1, wherein R1 is eth-1,2-ylene, prop-1,3-ylene, prop-1,2-ylene, 2-methyl-prop-1,3-ylene, but-1,2-ylene or but-1,3-ylene.

13. (Original) The compound according to claim 1, wherein R2 is a group of the formula



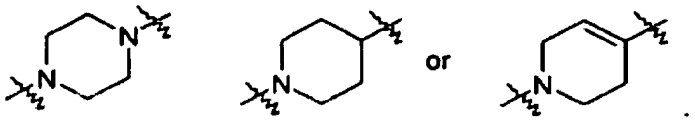
14. (Original) The compound according to claim 1, wherein

R4 is hydrogen;

n, m are 2, 1 or 1, 2;

R1 is eth-1,2-ylene, prop-1,3-ylene, prop-1,2-ylene, 2-methylprop-1,3-ylene, but-1,2-ylene or but-1,3-ylene;

R2 is a group of the formula



and

R3 is as defined in claim 1;

15. (Original) The compound according to claim 14, namely

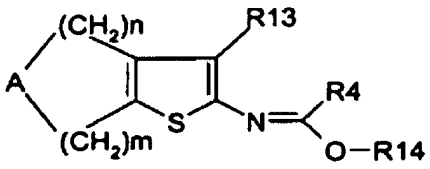
3-substituted 5,6,7,8-tetrahydropyrido[4',3':4,5]thieno[2, 3-d]pyrimidin-4(3H)-one derivatives;

3-substituted 3,5,6,8-tetrahydro-4H-pyrano[4',3':4,5]thieno[2,3-d]pyrimidin4-one derivatives, or

3-substituted 3,5,6,8-tetrahydro-4H-thiopyrano[4',3';4,5]thieno[2,3-d]pyrimidin-4-one derivatives.

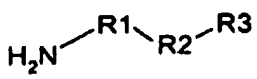
16. (Currently Amended) A process for preparing a compound according to claim 1

a) by reacting a compound of the formula (II)



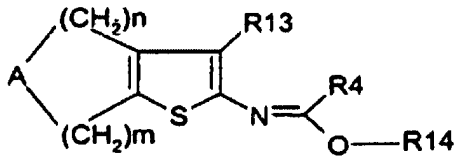
in which A, n, m and R4 have one of the meanings indicated in claim 1; R13 is CN or C,-3-alkyl-O-CO-, and R14 is C1.3-alkyl,

with a primary amine of the formula (III)



in which R1, R2 and R3 have one of the meanings indicated in claim 1, and isolating and, optionally, converting the resulting compound into a physiologically tolerated salt thereof, or

b1) by reacting a compound of the formula (II)

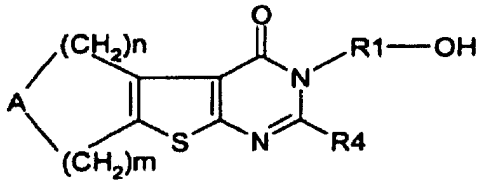


in which A, n, m and R4 have one of the meanings indicated in claim 1; R13 is CN or C_{1-3}-alkyl-O-CO-, and R14 is C_{1-3}-alkyl,

with a primary amine of the formula (IV)

in which R1 has one of the meanings indicated in claim 1;

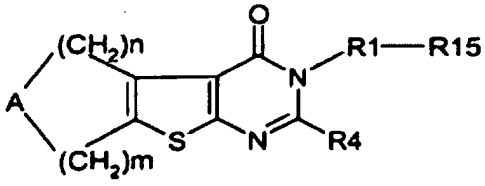
b2) reacting the resulting compound of the formula (V)



in which A, n, m, R4 and RI have one of the meanings indicated in claim 1, with

a halogenating agent ~~such as thionyl chloride~~; and

b3) reacting the resulting compound of the formula (VI)



in which A, n, m, R4 and R1 have one of the meanings indicated in claim 1, and R15 is halogen,

with a secondary amine of the formula (VII)

H—R2—R3

in which R2 and R3 have one of the meanings indicated in claim 1,

and isolating and, optionally, converting the resulting compound into a physiologically tolerated salt thereof.

17. (Canceled).

18. (Original) A pharmaceutical composition comprising at least one compound according to claim 1 and physiologically acceptable aids.

19-21. (Canceled)

22. (Currently Amended) A ~~The~~ method for treatment of depression which comprises administering an effective amount of a compound according to claim 1 to an individual in need thereof ~~according to claim 19, where the disorder is depression~~.

23-28. (Canceled)